APPENDIX F

Specification Support for Constructive Reduction within the Scope of Count 2

Representative Claim	Support in Specification
Claim 1796. A process for determining the sequence of a nucleic acid of interest comprising:	Support for a method of determining the sequence of a nucleic acid of interest can be found, for instance, on page 84, 2nd ¶, which states that the signaling molecules of the invention are "particularly important for detecting nucleic acids in gels (for example, sequencing gels)."
providing or generating detectable non-radioactively labeled nucleic acid fragments comprising: (a) a sequence complementary to said nucleic acid of interest or a portion thereof, and (b) different fluorescent labels covalently attached, directly or through a linkage group, to said fragments;	The specification provides support for detectable nucleic acid fragments labeled by one or more non-radioactive indicator molecules, *e.g.,* fluorescent dyes, including fluorescein, rhodamine and dansyl. *See, e.g.,* page 26, 1st ¶; example 9 on pages 46 through 47; page 96, last ¶ through page 97 1st ¶, and original Claims 42, 43, 88, 89, and 130-133. The specification discloses that the DNA and RNA probes comprise a nucleotide sequence substantially matching the nucleic acid sequence of interest and upon localization of the probe to the nucleic acid sequence of interest the resulting hybrid can be observed and identified. *See, e.g.,* page 98, final ¶ through page 100, 1st ¶. "Different" fluorescent labels are specifically disclosed on page 48, 1st ¶, "If necessary, two sets of labels can be used -- one which would be specific for chromosome 23 and one for some other chromosome. By measuring in each cell the ratio of the two labels, which might be of different colors, it is possible to identify the cells which show an abnormal number of chromosomes number 23." *See also*, Example 9 on pages 46 through 47, and original Claims 42, 43, 88, 89, and 130-133 that claim fluorescein, rhodamine and dansyl. Furthermore, the specification provides specific support for attachment of fluorescent indicator molecules "directly or through a chemical linkage or linker arm to the nucleotide" on page 96, last paragraph to page 97 1st full paragraph. *See also, e.g.,* page 95, 1st ¶; and page 96, 1st ¶ ("The nucleotides are then modified...by having covalently attached thereto, to the P moiety and or the S moiety and/or the B moiety, a chemical moiety Sig.").

subjecting said labeled fragments to a sequencing gel to separate or resolve said labeled fragments;	Separating and resolving are disclosed throughout the specification. For instance, the term "resolving" or "resolution" appear on pages 31 (1st full ¶) and 33 (1st full ¶). Furthermore, the specification provides support for "sequencing gel," *e.g.*, page 84, which necessarily involves separating and resolving nucleic acid fragments.
detecting non-radioactively said separated or resolved fragments by means of said attached different fluorescent labels; and	Detecting the presence of the fragments is disclosed throughout the entire specification, such as in the Abstract, page 6 (penultimate ¶), page 84 (2nd ¶), page 93 through page 95, and original Claims 1, 7, 141, 142 and 168. The specification also provides support for detecting the nucleic acids by means of fluorescent dyes, including fluorescein, rhodamine and dansyl. *See, e.g.*, page 26, 1st ¶; example 9 on pages 46 through 47; page 96, last ¶ through page 97 1st ¶, and original Claims 42, 43, 88, 89, and 130-133.
determining the sequence of said nucleic acid of interest from said detected fragments.	The specification provides support for detecting fragments on a sequencing gel, *e.g.*, page 84, which necessarily includes determining the sequence of the fragments.